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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,771	04/27/2001	Fumito Takemoto	2091-0242P	2813

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EXAMINER
HANNETT, JAMES M

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/842,771	TAKEMOTO, FUMITO
	Examiner	Art Unit
	James M. Hannett	2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 December 2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 12/16/2005 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1:      Claims 1-4, 7-10, and 13-16 are rejected under 35 U.S.C. 112, first paragraph, as failing

to comply with the written description requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to reasonably convey to one skilled in the

relevant art that the inventor(s), at the time the application was filed, had possession of the

claimed invention.

The newly added limitation states that the tone conversion processing and the color

correction processing are performed **simultaneously** using a generated three-dimensional lookup

table. However, as described in the applicant's original disclosure, and depicted in Figures (2 and

9), the tone conversion processing (22) and the color correction processing (27) are not

performed simultaneously.

Response to Arguments

Applicant's arguments filed 12/16/2005 have been fully considered but they are not persuasive. The applicant argues that he prior art does not teach the new limitation of comparing a total number of pixels in an image with the number of lattice points in the three-dimensional look-up table. The applicant points out that Nishigaki in view of Oku compares a subset of the pixels of the entire image to the number of lattice points and does not the total number of pixels of the image.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., comparing the total number of pixels of the image) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The examiner disagrees with the applicant and points out that the amended claim merely recites comparing "a total number of pixels in an image" and does not claim "comparing the total number of pixels in the image". The examiner asserts that the claim is written broadly and the limitation of "a total number" is not viewed as the total number of pixels in the image array. The examiner views the claimed "a total number" to merely be the total number of pixels used for the comparison.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2: Claims 5, 11, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,590,678 Nishigaki et al in view of 5,489,996 Oku et al.

3: As for Claim 5, Nishigaki et al teaches on Column 6, Lines 3-16 an image processing method for obtaining processed image data by carrying out tone conversion processing (2005 and 2008) and color correction processing (2007) on image data obtained by a digital camera. Nishigaki et al teaches on Column 8, Lines 7-26 comparing a number of lattice points (N) in a three-dimensional look-up table (LUT) used for carrying out the tone conversion processing (2005 and 2008) and the color correction processing (2007) on the image data with a number pixels (M) in an image represented by the image data; Nishigaki et al teaches on Column 8, Lines 13-15 and on Column 8, Line 43 the step of generating the three-dimensional look-up table, Nishigaki et al teaches on Column 9, Lines 4-18 the step of obtaining the processed image data (output signal) being a step of obtaining the processed image data by converting the image data (input image data) according to the three-dimensional look-up table (LUT) in the case where the number of the pixels (M) is larger than the number of the lattice points (N). Nishigaki et al teaches that the number of input signals (M) is larger than the number of lattice points (N) and does not teach that the number of lattice points can be equal to the number of input signals. Nishigaki et al teaches that this is done to save memory space. Furthermore, Nishigaki et al depicts in Figure 3 and teaches on Column 7, lines 60-65 that the gamma correction portion (2008) corrects a tone curve of the image data. Therefore, it is viewed by the examiner that the gamma correction block (2008) performs a tone conversion. Furthermore, because the processing block (2008) follows the color processing block (2007), It is viewed by the examiner that the

tone correction in (2008) is performed in accordance with processing which is carried out in

accordance with the LUT used in processing block (2007).

Oku et al teaches on Column 2, Lines 6-15 that it was well known to use three-

dimensional look-up tables where the input color signals and the output color signals are each

expressed with 8-bits, if a large memory size is practical to use. Therefore, the number of input

signals is equal to the number of lattice points.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to carrying out the tone conversion processing (2005 and 2008) and the

color correction processing (2007) on each of the pixels (M) in the image represented by the

image data (input signal) in the case where the number of the pixels (M) is equal to the number

of the lattice points.

4:      As for Claim 11, Nishigaki et al teaches on Column 6, Lines 3-16 an image processing

apparatus for obtaining processed image data by carrying out tone conversion processing (2005

and 2008) and color correction processing (2007) on image data. Nishigaki et al teaches on

Column 7, Lines 65 – Column 8, Line 15 and on Column 8, Lines 7-26 three-dimensional look-

up table generating means for comparing the number of lattice points (N) in a three-dimensional

look-up table used for the tone conversion processing (2005 and 2008) and the color correction

processing (2007) on the image data with the number of pixels (M) in an image represented by

the image data. Nishigaki et al teaches on Column 8, Lines 13-15 and on Column 8, Line 43

generating the three-dimensional look-up table (LUT) in the case where the number of the pixels

(M) is larger than the number of the lattice points (N); Nishigaki et al teaches on Column 9,

Lines 4-18 processing means for obtaining the processed image data (output signal) by

converting the image data (input signal) according to the three-dimensional look-up table (LUT)

in the case where the number of the pixels (M) is larger than the number of the lattice points (N).

Nishigaki et al teaches that the number of input signals (M) is larger than the number of lattice

points (N) and does not teach that the number of lattice points can be equal to the number of

input signals. Nishigaki et al teaches that this is done to save memory space. Furthermore,

Nishigaki et al depicts in Figure 3 and teaches on Column 7, lines 60-65 that the gamma

correction portion (2008) corrects a tone curve of the image data. Therefore, it is viewed by the

examiner that the gamma correction block (2008) performs a tone conversion. Furthermore,

because the processing block (2008) follows the color processing block (2007), It is viewed by

the examiner that the tone correction in (2008) is performed in accordance with processing which

is carried out in accordance with the LUT used in processing block (2007).

Oku et al teaches on Column 2, Lines 6-15 that it was well known to use three-

dimensional look-up tables where the input color signals and the output color signals are each

expressed with 8-bits, if a large memory size is practical to use. Therefore, the number of input

signals is equal to the number of lattice points.

. Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to carrying out the tone conversion processing (2005 and 2008) and the

color correction processing (2007) on each of the pixels (M) in the image represented by the

image data (input signal) in the case where the number of the pixels (M) is equal to the number

of the lattice points.

5:      As for Claim 17, Claim 17 is rejected for reasons discussed related to Claim 5, since

Claim 5 is substantively equivalent to Claim 17.

6:   Claims 6, 12 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

USPN 6,590,678 Nishigaki et al in view of 5,489,996 Oku et al in view of USPN 5,974,173

Kimura.

7:      In regards to Claim 6, Nishigaki et al in view of Oku et al teaches the use of an image

processing apparatus that performs tone and color correction by using a three-dimensional look-

up table. However, Nishigaki et al does not teach the step of setting a number of lattice points in

the three-dimensional look-up table according to a number of bits of the image data.

Kimura teaches on Column 4, Lines 6-12 and Column 4, Lines 38-51 and Column 9,

Lines 45-52 and Column 10, Lines 1-2 and on Column 3, lines 28-62 that it is advantageous

when using three-dimensional look-up table that perform color and tone correction to reduce the

bit length of the look-up table in order to reduce memory size. Therefore, Kimura teaches setting

the number of lattice points in the three-dimensional look-up table according to the number of

bits of the image data

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to reduce the bit length of the look-up table in Nishigaki et al according to

the number of bits of the image data as taught by Kimura in order to reduce memory size.

8:      In regards to Claim 12, Nishigaki et al in view of Oku et al teaches the use of an image

processing apparatus that performs tone and color correction by using a three-dimensional look-

up table. However, Nishigaki et al does not teach the step of setting a number of lattice points in

the three-dimensional look-up table according to a number of bits of the image data.

Kimura teaches on Column 4, Lines 6-12 and Column 4, Lines 38-51 and Column 9,

Lines 45-52 and Column 10, Lines 1-2 and on Column 3, lines 28-62 that it is advantageous

when using three-dimensional look-up table that perform color and tone correction to reduce the

bit length of the look-up table in order to reduce memory size. Therefore, Kimura teaches setting

the number of lattice points in the three-dimensional look-up table according to the number of

bits of the image data

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to reduce the bit length of the look-up table in Nishigaki et al according to

the number of bits of the image data as taught by Kimura in order to reduce memory size.

9:       In regards to Claim 18, Claim 18 is rejected for reasons discussed related to Claim 6,

since Claim 6 is substantively equivalent to Claim 18.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to James M. Hannett whose telephone number is 571-272-7309.

The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Ometz can be reached on 571-272-7593. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

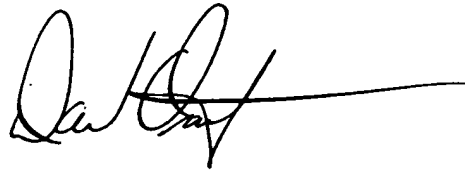system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James M. Hannett
Examiner
Art Unit 2612

JMH
March 2, 2006

DAVID OMETZ
SUPERVISORY PATENT EXAMINER